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FARMER & GARDENER.

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INDIANA FARMER & GARDENER.

Indianapolis, Saturday, October 18, 1845.

Excuse Mistakes.

The editor will be absent during the making up of the two ensuing numbers. Although he has prepared, beforehand, the matter for them, he has not secured them from errors. Our compositor is a very careful type-setter, but our execrable manuscript is more than a match for any man—even ourself, sometimes. We will, therefore, make the best of it and say, as Dryden did in one of his prefaces, "if the reader discover any dullness (mistake,) he may be sure there was a *design* in it."

Getting ready for Winter.

Haul tanbark and bank up around the house to ensure a warm cellar. Cellar windows should be kept open through the day, and closed after the nights begin to freeze, as late in the season as possible. See that dry walks are prepared from the house to all the out-houses. Do not be stingy of your materials; make the paths high and rounding, so as to ensure dryness, especially about the barn. See that stones, gravel, or timber are laid so as to be out of the way of cattle's feet, and just in the way of your own. We have seen swamp-barn-yards, before going into which a prudent man would choose to make his will. Mud on the shoes from roads and fields is all well enough; but mud from one's own yards, shows that the owner has not fixed up as he ought to have done.

If your stables are old, examine the floor; or some night may let a horse through, to come out lame for life. If you have a dirt floor, see that it is carefully laid, and remember that if it be inclined either way, it should be *from* the rack and not *toward* it. Let your wagons, carts, plows, &c., be repaired during the fall and winter, and not be left till spring. See that your shingles are all sound on the house, barn, and shed. That leak which you have allowed to drop, drop, drop all summer has at last taken off a yard or two of plaster, and it is time now to put on a shingle or two. There is another leak or two that *must* be stopped. That pocket of yours which has let out dime after dime for liquor, the hole getting bigger and bigger every year, now is the time to sew *it* up, or it will rip *you* up. A pocket is a small place, tobesure, but we have seen barns, cattle, and acre after acre slip thro' a hole in it which, at first, was only large enough to let sixpence through.

See that all your tools have a safe and dry standing place; hoes, rakes, scythes, sickles, yokes, spades, shovles, chains, pins, harrows, plows, carts, and sleds, axes, mattox, hammers, and everything, but your geese and ducks, should be kept from wet and snow.

If you have no stables for your cattle you should have good sheds provided, opening to the south. Even when cattle are allowod to run through the stock-fields, there ought to be in some warm place an ample shed to which they can resort during wet and cold weather; and one sufficiently snug can be made without calling in the carpenter or buying lumber.

To Preserve Dahlia Roots.

The least frost destroys these roots. In warm and damp cellars they rot. Very many persons have no cellars at all, (a very frequent destitution at the west:) others are so small and moist, as to be unfit, (our own, for instance;) and the extreme variations of temperature during the day and night make sitting rooms and their closets very unsafe places for them. The labor of packing them in sand is not great to those who have it ready or men to procure it; but to ladies, and especially to many in towns and cities who are enthusiastic cultivators of flowers, but grievously vexed with poverty of pocket, this plan is inconvenient.

Why may not dahlias be kept in the soil? We think there is not the least doubt that they can be if protected from *frost* and *heat*. Every one knows that in spading up in the spring the dahlia beds of the previous year, large sections of the tubers, which had broken off when the main roots were removed, are found in a fresh and sound condition.

Let a pit be dug say too feet deep, the roots carefully disposed in it, covered with soil, and the whole protected by coarse litter, straw, &c. We do not advise any to adventure their whole stock in this manner; but we design to select the inferior sorts from our stock and treat them thus; and if successful, we shall, another year, try our whole stock.

Neither great poverty nor great riches will hear reason.

The American Shepherd;

Being a history of the sheep, with their breeds, management, and diseases; illustrated portraits of different breeds, sheep-barns, sheds, &c., by A. L. Morrell, New York. Harper & Brothers, 1845, pp. 437.

We have received from the publishers a copy of this new and valuable manual. After a somewhat particular examination we are free to recommend it, very highly, to such of our readers as have, or mean to have flocks. It devotes chapter first to the *Properties of Wool*. Chapter two is devoted to the history of Argalis, Musmon, Asiatic, and African sheep. Chapter three considers European sheep; Italian, Spanish, French, and Swiss. Chapter four describes Saxon, Prussian, Silesian, Hungarian, Swedish, Danish, Iceland, Russian, and Australian sheep. Chapters five and six are devoted to British sheep, and Chapter seven to American sheep. The discussion of the subject matter is thorough and workmanlike, and contains a great body of valuable information. Chapters eight, nine, and ten, treat of the summer management of sheep with great fullness and particularity. Chapters 11, 12, and 13 are devoted to the winter management of sheep. Chapter 14, breeding and crossing. Chapter 15, Structure of Sheep; 16, Diseases; 17, Surgical Operations. An appendix contains letters from twenty-seven of the most eminent sheep-raisers, giving a great amount of information upon various points relating to Sheep Husbandry.

This work does not profess to be local or partial; it is not a work for the north, or the south — for those who have one kind of sheep, or who follow any particular system of raising. It is a manual on the whole subject of sheep-raising for all circumstances. And a more valuable offering on this important branch of husbandry could not have been made.

The book is for sale at Turner's Book Store in this place.

An hearty good-will never wants time to show itself.

From hearing comes wisdom; and from speaking, repentance.

A contented mind is a great gift of God.

Keeping young Pigs in Winter.

There is both negligence, and mistake, in the way of wintering pigs. I am not talking to those whose manner of keeping stock is, to let stock take care of themselves; but to farmers who *mean to be careful*. Hogs should be *sorted*. The little ones will, otherwise, be cheated at the trough, and overlaid and smothered in the sleeping-heap. There should not be too many in one enclosure; especially young pigs should not sleep in crowds; for, although they sleep warmer, they will suffer on that very account. Lying in piles, they get sweaty; the skin is much more sensitive to the cold, and coming out in the morning reaking and smoaking the keen air pierces them. In this way, young pigs die off through the winter by being too warm at night. If you have the land-shark and aligator breed, however, you should crowd these together, for the more they die off the better for the farmer.

Guarding Cherry-trees from Cold.

This tree is peculiarly liable while young but more especially when coming into bearing, to be roughly handled by our winters. The bark at the surface of the ground splits, and often the trunk, enfeebling the tree and sometimes destroying it. The evil does not result from the cold, but from the action of bright suns upon the frozen trunk. Let those having valuable young trees, prepare them for winter by giving a cheap covering to the trunks, so that the sun shall not strike them. This may be done by tying about them bass matting, long straw, corn-stalks, or any similar protection.

Preparing Cuttings in the Fall.

Cuttings of the currant, gooseberry, and grape are better if cut immediately on the fall of the leaf, plunged into moist sand two-thirds of their length, and placed in a cellar. If nature is as propitious to others as she has been to us, the cuttings will be found in the spring with the granulations completed at the lower end, and the roots just ready to push; and on being planted out, they grow off immediately, forming during the season well established plants.

We told you so.

We warn all ladies having pot-plants designed for winter wear, to be prudent *before hand*, or some night will cut every tender plant left out, and *then* prudence will be good for nothing. Every one who pretends to keep parlor plants should own a *thermometer*. At present it may hang out of doors near your plants; if at sundown or at nine o'clock it stands anywhere near 40° your plants are in danger. Sometimes it will fall, in one night, from 50° below 32°, which last is the freezing point.

A little foresight and care *now* will save lovers of flowers many useless regrets hereafter, when they sit in cheerless parlors "*wishing* they had only known that there was going to be a frost." So, if you love your plants, remember "*we told you so.*"

Seedling Trees.

Many trees which are entirely hardy when grown, are very tender during the first and second winters of their seedling estate. They should be slightly protected for one or two winters, therefore, with straw, refuse garden gatherings, leaves, &c. Sometimes it is best to raise them and *lay them in by the heels*, by which those gardeners designate the operation of laying trees in trenches or excavations, and covering the roots and a considerable portion of the stems. This will not be extra labor in all cases—when the young trees are to be reset, at any rate, the second year in nursery rows.

Autumn Planted Onions.

We think it no cheating to put as much spring work into the fall of the year as possible. Whatever crop will bear autumn sowing, should then be attended to. Onions for seed should be planted in October; and, like their more brilliant, but less perfumed, friends of the tulip and hyacinth connections they will thoroughly root themselves during the autumn and mild winter weather, and be ready for early work, the moment the frost rises from the ground. We know of no reason why onion-*sets* may not also be planted out. We shall certainly found our practice on our faith in this matter.

Cider Apples.

It is the practice of most farmers to use any apples for cider which are not wanted for other purposes; very few ever plant with express reference to obtaining a fruit exclusively for cider. There is as much difference in the disposition of different apples to make good cider, as there is in grapes to make wine. If a cider-orchard *is* to be planted, which we certainly do not recommend, as much pains should be taken to procure *exactly* the right sort of fruit, as if the orchard was planted for marketing purposes. A good cider apple should possess *astringency* and *sacharum* in abundance. Cider made from very astringent fruit, has been pronounced by medical men in England equal to port wine for medical use. The strength of cider is determined by the *specific gravity* of the apple-juice. One thousand grains of water are taken as the standard. The Foxly has a specific gravity of 1080; the Redstreak of 1079; the Siberian Honey of 1091, which is the greatest of any that has met our eye.

New Jersey is far-famed for its cider. The Harrison apple and Hughes' Virginia Crab are the two most celebrated of their cider-apples. Instead of giving a list ourselves we shall make over to our readers that prepared by A. J. Downing. in his "*Fruits and Fruit Trees of America.*"

COOPER'S RUSSETING. Coxe. This native apple is especially suited to light sandy soils, where some other sorts fail. It makes an exceedingly strong cider, of delicious flavor.

Fruit small, oblong or ovate, pale yellow, partially covered with russet. Stalk slender, and very long. Flesh dry, rich and sweet. The fruit is fit for cider in November, keeps well through the winter, and is esteemed by many for cooking. Tree small, with numerous little branches.

CAMFIELD. Coxe. *Newark Sweeting.*—Another capital New Jersey, cider apple, ranking next to the Harrison. It forms a fine large tree, with straight, spreading limbs, and is very productive.

Fruit of medium size, roundish, rather flattened. Skin smooth, washed and striped with red, over a greenish-yellow ground. Flesh white, rather dry, firm, rich and sweet.

GILPIN. Coxe. Thomp. *Carthouse.* A handsome cider fruit, from Virginia, which is always a very good table-fruit from February to May. A very hardy, vigorous and fruitful tree.

Fruit of medium size, roundish-oblong. Skin very smooth and handsome, richly streaked with deep red and yellow. Stalk short, deeply inserted. Calyx in a round, rather deep basin. Flesh yellow, firm, juicy and rich, becoming tender and sprightly in the spring.

HARRISON. Coxe. New Jersey is the most celebrated cider-making district in America, and this apple, which originated in Essex county, of that State, has long enjoyed the highest reputation as a cider fruit. Ten bushels of the apples make a barrel of cider. The tree grows thriftily, and bears very large crops.

Fruit medium size, ovate or roundish-oblong. Skin yellow, with roundish, distinct black specks. Stem one inch, or more, long. Flesh yellow, rather dry and tough, but with a rich flavor, producing a high-colored cider, of great body. The fruit is very free from rot, falls easily from the tree about the first of November, and keeps well. The best cider of this variety, is worth from six to ten dollars a barrel, in New York.

HEWE'S VIRGINIA CRAB. Coxe. The Virginia Crab makes a very high flavored dry cider, which, by connoisseurs, is thought unsurpassed in flavor by any other, and retains its soundness a long time. It is a prodigious bearer, and the tree is very hardy, though of small size.

Fruit quite small, about an inch and a half in diameter, nearly round. Skin dull red, dotted with white specks, and obscurely streaked with greenish-yellow. Stalk long and slender. Flesh, fibrous, with an acid, rough, and astringent flavor, and when ground, runs clear and limpid from the press, and ferments very slowly. The Virginia Crab is often mixed with rich pulpy apples, to which it imparts a good deal of its fine quality.

The ROANE'S WHITE CRAB is a sub-variety of the foregoing, about the same size, with a yellow skin. It makes a rich, strong, bright liquor, and keeps throughout the summer, in a well-bunged cask, perfectly sweet.

HAGLOE CRAB. Coxe. *Hagloe Crab.* Lind? Thomp.? The Hagloe Crab is one of the best summer cooking apples, and the flavor is pleasant, as a desert fruit. As a cider fruit, it is perhaps unequalled, the specific gravity of the must being 1081, and the liquor which it makes is exceedingly rich and high flavored.

Fruit below medium size, roundish flattened, streaked with red. Stalk large and short. Flesh very soft and woolly with a

moderate juiciness, with a rich, acid flavor. Ripens in August, but will keep sound a long time. The tree has dark colored and thick, strong, shoots, with large buds, and is a most abundant bearer. We think it doubtful if this is identical with the old English Hagloe Crab, which is small and ovate, but the quality of the two, as cider fruit, is very similar.

Red Streak. Coxe. *Herefordshire Red Streak*, *Scudmare's Crab*, of English gardens. A capital English cider apple, which thrives admirably in this country, and is very highly esteemed, as it makes a rich high flavored, strong liquor. It is a handsome grower, and a great bearer.

Fruit of medium size, roundish. Calyx small, set in a rather deep basin. Stalk rather slender and short. Skin richly streaked with red, with a few yellow streaks and spots. Flesh yellow, rich, firm and dry.

Styre. Thomp. *Forest Styre*. Lind. *Styre*. Coxe. The Styre is a famous old English cider fruit, and Lindley remarks that Styre cider may be found in the neighborhood of Chepstow, thirty or forty years old. Fruit middle sized, round, pale yellow, with an orange cheek. Stalk short. Flesh firm, of high flavor and makes a high colored liquor. The tree thrives well here, and forms a very upright, broom-like head. October to January.

In addition to the foregoing, several of the table apples already described are esteemed for cider, as the Newtown Pippin, Wine Apple, Winesap, etc., and some of the high flavored English varieties in the preceding pages are very highly valued for cider in Britain,—the Golden Pippin, Golden Harvey, Downton, &c. The Fox Whelp is a very celebrated apple of this class, used to give flavor and strength to nearly all the choice cider of Herefordshire, which is not yet introduced here, to our knowledge. It is middle sized, ovate, dark red, with a rich, heavy juice, of the specific gravity 1078. The Siberian Bitter Sweet is a variety of crab raised by Mr. Knight, and about twice the size of the Siberian Crab, small roundish, ovate, yellow; an immense bearer, and held in very high esteem in England, for mixing with other cider apples, to impart richness.

Distilleries.—From the latest authorities, it appears that the number of distilleries in the United States is 10,406; the number of gallons of distilled liquors produced annually is 41,602,607, which, if sold at twenty cents per gallon, would produce $8,320,501 40.—What untold misery is the result of this enormous and degrading traffic!

Indiana Hemp.

We have conversed with a gentleman in this State, who has given us permission to copy a portion of a letter from Boston, giving the following highly interesting particulars in respect to Indiana hemp:

"I enclose you a test of Indiana, Missouri, and Kentucky, which is the result of experiments made at the navy yard, from hemp of similar appearance and like cleanliness from each State. The result is from one hundred experiments on each kind, and is the mean strength from the respective trials. They can be relied on as accurate.

It gives me pleasure to be able to enclose you a report so favorable to your hemp, and trust it will be the means of pecuniary gain.

Your friend, &c.

Francis Cox.

Experiments made on rope 1¾ inch in circumference, manufactured from American hemp, viz:

Indiana.	*Kentucky.*	*Missouri.*
Test, 4710	Test, 4474	Test, 4195
4700	4082	4160
4896	4272	4192
14306	12828	12547

Mean strength, Indiana 4768 2-3; Kentucky, 4276; Missouri, 4182 1-3.

The usual test of Riga is 4400 to 4900.

Asparagus Beds.

Let asparagus tops, and all weeds be removed; put about three inches depth of well decayed manure upon the beds, and with a fork, or carefully with a spade, turn it under; but not so deeply as to wound the crowns of the plants. Salt is palatable for this vegetable, and, if in preparing your beef and pork for winter you have any old brine to spare, it may be put on the beds with advantage.

To kill moss on roofs.—A gentleman in Hadley states that the moss which sometimes attaches to the roof on the north side of buildings, causing a premature decay of the shingles, may be completely removed by a little dry white lead sprinkled near the top of the roof just before a rain. The rain washes it down among the moss, and, as he believes, is poisonous to it, as the moss dies and the roof is cleared. He was first led to make the trial of it from observing that while a considerable quantity of moss grew upon a particular roof, the part opposite the chimney, which had been painted white, was entirely free from it.—*Amherst Express.*

ORIGINAL CORRESPONDENCE.

Advantages of Railroads to Farming Communities.

Although the following letter was not intended for publication, we take the liberty of inserting it. The source from which it comes entitles it to great consideration:—*Editor.*

One advantage from which much has been expected, has not and probably will not realize the public expectation. This is the enlargement of the intermediate towns.—The supply of manufactured articles and mechanical labor from a distance becomes so easy and cheap that towns cannot flourish unless they are prepared for a fair competition; and the importation of necessaries from abroad and the exportation of produce on Rail Roads require so few hands that towns which are to flourish in their vicinity must arrange their business accordingly. The Farmers, however, and those who enter properly into manufacture or engage in mechanical labor find at their doors a market and a ready supply of raw materials. The amount saved by cash in purchasing and keeping up farms is very considerable.

Whether the towns at each end of the Road will profit as they may by the advantages they will have, must depend on the course they pursue. The tendency of cheap and rapid travelling is to concentrate sales of Merchandise, wholesale as well as retail, in a few large places, and if Madison and Indianapolis merely calculate to flourish by *selling goods* they will always be poor trifling towns. Their young men may dress well, cultivate their hair and whiskers, and sport their cigars and canes, but the buyers of goods will go mostly to Cincinnati. But let the manufacture of heavy and perhaps dirty articles be commenced, say in Iron, Lead, Brass, Cotton, Wool, Wood, &c. The persons employed will patronize Merchants at home and build up towns on the right foundation, and then too they will have all the benefits expected from competition in large towns. The numerous stores in our little towns are at present sadly out of place, and the young men who choose the yard stick in order to be *nice* have not frequently minds above the tape and needles they sell. We very much want in this place more capital invested in Manufactures, and that is the case also at Indianapolis, though in both there are persons who deserve much credit for their enterprise and public spirit.

I had intended to write to you more at length but being rather unwell and very much hurried since my return here I have not been able. The business for August was about 50 per cent. over that of last year, the road having not been extended except for Passengers. And the receipts the first week the cars ran to Edinburgh were nearly double that of the corresponding week last year.

For the Indana Farmer and Gardener.

Polar Plant.

Dear Sir:—During the year 1836, whilst passing through Illinois and portions of Wisconsin and Iowa, my attention was frequently called to the *Polar Plants.* At first I thought the property of polarity ascribed to it was entirely fabulous. I afterwards examined the fact however with a pocket compass, at a great many different times and places and was induced to believe there was some truth in the representation. Even since that time I have paid some attention to the question, and have always found more or less evidence of the fact. In order to test the matter, last spring I procured some of the seed and planted it in a pot which had the points of the compass marked upon its rim. In due time two plants came up with the first leaves of each at about right angles with the leaves of the other plant, neither corresponding with the points of the compass. The regular leaves soon began to grow, and, notwithstanding the position the first leaves occupied, arranged themselves North and South. This was the case until I had four well developed leaves. In the mean time several other plants had appeared in different positions, some of which had grown sufficiently to show the same disposition. I then turned my pot so as to bring the North and South points to the East and West. The younger leaves soon turned round to the North and South, those partly grown seemed to turn at the top so as to give them a kind of twist, but those which grew no more did not change their position. I have now five plants, they have fourteen leaves, four of which are drying and crisping with the season; one stands irregularly, apparently from a weakness in the stem, and nine still adhere substantially to the position of North and South. These are certainly curious facts, and go far to show that the plant has polarity. I have tried the leaves, however, living, green, dried and pulverized, to a strong magnet and find no sensible effect. The full-grown leaf is about the size of a common dock leaf, but stiffer and more upright, and is notched like oak somewhat. The plant is indigenous to our wettish prairies, and grows in a bunch with the leaves generally arranged North and South, shooting up a middle stalk to the height of five or six feet, which bears a flower about the size of your hand's palm, not unlike the common sun-flower. Whilst standing in the midst of it on the prairie, although you may not find each leaf true to

its position, yet if you look East or West you will find the broad and glistening part of the leaves towards you, and if you look North or South you will see the edges of the leaves presented to you, which gives the plant quite another and a very different appearance. I have never met with any thing concerning the plant, except a newspaper paragraph some years ago, merely noticing the fact of its polarity.

Will yourself, or some of your correspondents who are Botanists, name and classify this plant and give us its peculiar properties, or refer us to where the information may be had? The question may not seem practical, as your paper so justly claims to be, but it is certainly curious. We know the important influence many imponderable agents, such as heat, light, electricity, &c. have upon vegetable physiology; may not magnetism be classed amongst them?

LOGANSPORT, Sept. 22nd, 1845. H. P. B

Of the Improvement of Soils without Manures.

Soils may be improved in several ways without manures, and their produce of useful vegetables much increased; the principal ones, are, pulverization, and alteration of their constituent parts, draining, or watering, and by consolidation.

Pulverization.—It is well known that plants will not grow in a soil which is too hard and compact to admit of the free admission of air, water, and heat, and for the extension of the roots of plants. An abundance of roots is essential to the thrifty growth of most plants, and puliverization promotes the formation of roots and fibres. Hence the utility of stirring the soil after the plant has begun to grow, to increase the formation of roots and fibres. Pulverisation also increases the power of the soil to absorb moisture from the atmosphere, by rendering it something like a piece of sponge. Hence the utility of hoeing plants when the ground is dry, because it increases the absorbent powers of the soil. Therefore the old custom of hoeing when the ground is moist, is not founded on truth. A soil is much more heated by the air, when laid light than when compact; because the earths of a soil are bad conductors of heat, and could not be readily heated by contact only, and therefore require the free ingress of warm air, to produce a genial warmth. Pulverization also increases the food of plants, by enabling water, which contains carbonic acid, to pass freely to the roots; it also exposes the manures of the soil to heat, light, &c., producing fermentation, and thus preparing them to answer as food for plants.

Alteration of the Parts of Soils may be produced either by adding what is deficient, or taking away that part which is in excess, or by changing the nature of parts by fire.

To ascertain the composition of soils which are unproductive, in order to improve them by an alteration of their parts, it is necessary to compare them with fertile soils in similar situations, and the same neighborhood; the difference may in some cases indicate the proper method of improvement. If the fertile soil contain a large quantity of sand in proportion to that of the barren soil, sand added to the latter may improve it; if deficient in clay or lime, these must be added. If a soil contain acid or the salts of iron, although otherwise of a good texture or composition, it cannot produce the noble class of plants. If a soil contains sulphate of iron (cepperas) the proper remedy will be a top-dressing of lime; and the same would be proper for all *sour* soils. Where a soil contains too much lime, a dressing of sand will improve it; and sandy soil would be benefitted by a dressing of clay or marl, or even swamp mud. Soils having the nature of peats, are rendered exceedingly productive by draining and a pressing of sand. The materials necessary for these purposes are generally found near at hand. Many of the poor sandy soils of New England might be greatly improved by the bog mud which is found in the low places. Beds of sand and gravel are always found below clay.

Burning has been long practiced in our country on new soils; less, however, with a view to improve the soil than to clear the ground.

Soils which contain a large portion of dead vegetable matter, or which are composed of stiff clay, may be economically improved by removing the top sod, drying it, and then burning it on the sod, or if covered with bushes, cutting them down and burning them on the ground: The effect of fire on the soil is, to render it less compact, lighter, and not so retentive of moisture; and when properly applied it will render a stiff, damp, and cold soil into one dry, powdery and warm: but where a soil already posseses these essential qualities, fire must be injurious, because it will destroy a portion of the vegetable matter in the soil. It is evident, then, that sandy soils are injured by burning. We have seen the experiment tried on a large scale in New Hampshire, of clearing a sandy soil without fire. Four acres of *pine plain* had the wood and underbrush cut and carried off clean, and then sowed with winter rye and grass seed. Adjoining this was a piece of the same kind of soil, which was cleared in the usual way by fire, and sowed at the same time with rye. The first piece yielded 40 bushels of rye to the acre, while

the piece burnt over yielded only 21 bushels to the acre; and the former piece has since yielded much more pasture feed than the latter. Here the fire burnt up the vegetable substances of the soil and left it poor.

Draining and Flooding.—Where a soil rests upon a subsoil or bed which does not permit water to pass through it with facility, the water will collect on the surface and become stagnant, which obstructs the free circulation of the juices of plants and thus injures their growth. Hence the utility of surface draining, or small ditches and gutters. Some soils are full of springs, causing them to be cold and unproductive, and hence the origin and utility of drains under the surface, to convey away the superfluous water.

In many parts of New England meadows are flooded in the fall and during the winter, with a beneficial effect—the water generally being impregnated with animal and vegetable matter, particularly if the stream flows through a cultivated region. In cold seasons it preserves the roots and leaves of grass from being injured.

Consolidation.—Every gardener knows the benefit of treading in seeds, on some kinds of soil; and the utility of the roller is beginning to be appreciated by our farmers. Porous and loose soils are much benefitted by being compressed, particularly after receiving a dressing of loam or sand. Light sandy soils are much improved by the use of a good roller.

Rotation of Crops.— There is another means of improving a soil without the use of manure, and that is by growing different kinds of plants in succession upon the same soil; this is called a *rotation of crops.*

It is well known that all plants will not thrive equally well on the same soil; because some require a particular part of the soil to perfect their seeds, while others require another part. Therefore, if the different kinds of vegetables are planted in succession on the same soil, each one will deprive it of that particular principle which is suited to its nature. This kind of rotation is found to take place in nature.—Black and grey ash is generally found to succeed a growth of pitch pine. New lands produce strawberries and dwarf blueberries, and in a short time, they exhaust the soil of the particular principle necessary to their healthy growth, and then decay and disappear, and are replaced by other plants. The manner in which certain plants *travel* from one place to another, is well known, as mint, crow-foot, &c.

The following general principles have been laid down as to the rotation of crops:

1. All plants exhaust the soils more or less.
2. All plants do not equally exhaust the soil.
3. Plants of different kinds do not exhaust the soil in the same manner.
4. All plants do not restore to the soil the same quantity or quality of manure.
5. All plants are equallay favorable to the growth of weeds.

The following consequences may be drawn from these principles.

1. However well a soil may be prepared, it cannot long nourish crops of the same kind in succession, without becoming exhausted.
2. Every crop impoverishes a soil more or less, according as more or less is restored to the soil as manure, from the decay of the plant cultivated.
3. Perpendicular rooted plants, (clover, beets, &c.) and such as root horizontally, (wheat, Indian corn, &c.) ought to succeed each other.
4. Two plants favorable to the growth of weeds, ought not to follow each other.
5. Such plants as greatly exhaust the soil, (as the grains and Indian corn,) should only be sown when the land is in good heart.
6. In proportion, as a soil is exhausted by successive crops, plants which are less exhausting ought to be cultivated.—*Scientific Tracts.*

Strawberries.

Those that have delayed to set out this delicious fruit should attend to it immediately. Mr. Hovey says, "We have given great attention to the strawberry, and cultivate all the varieties introduced for the last twenty years, and proved nearly twenty sorts the present season. Of the whole number, however, there are only four which can be recommended for general cultivation. The four varieties are Old Scarlet or Early Virginia, the best and largest very early variety; the Boston Pine to succeed it, and in small gardens to take its place; Hovey's Seedling, and the common Red Wood.—These will give a continued succession of splendid fruit of unsurpassed excellence, from early in June to the end of July, a space of two months; and when desired, with some care, the Alpine will prolong the season to October. The market affords the best test of the superiority of any kind for general cultivation. Let a comparison be made, of the supply, and the sorts three years ago, with the past season. Keen's Seedling, imported in 1826, out of all the foreign kinds, was the only large one to be seen, and that exceedingly scarce. This year nearly the whole stock consisted of Hovey's Seedling, the Early Virginia, and the Wood—*three* cultivators alone sending to Boston market more than *four thousand five hundred quarts* of the former variety.

Farmer and Mechanic.

From the Farmer and Mechanic.

Cultivation of the Grape.

SINGSING, August 4, 1845.

Mr. Fleet—When you were last at my place, you requested me to send you a written statement of my mode of treating the grape vine. In the first place, I dig a hole two and a half to three feet deep, according to the length of the vine, never less than two, about three feet square. My reason for doing so, is to get the roots beyond the influence of the sun, as they are naturally inclined to approach the surface, causing the vine to throw out an unusual quantity of foliage and fruit; and when the dry season commences, they feel the drought immediately. After the vine has been established for three years, I dig down and cut off every root from the main body. In doing so, I dig a trench each side of the vine a foot deep, from two to three feet wide, and fill it up with all sorts of rubbish, such as pea-brush, bones, shoes, &c. I chop up all my vine trimmings in pieces of about eight inches in length, and throw them in the trench. I then throw the ground taken from the ditch over the whole, then cover the surface as far as circumstances will permit, with long litter, pea brush, &c., in order to exclude the sun as much as possible. By excluding the sun, the ground becomes moist, and is pierced with thousands of angle-worm holes; whenever we have a shower, the rain filters through and is carried down those holes to the roots. I do not think it necessary for the sun to touch the earth at all; and this I think I have fully proved. I have one grape vine that I planted in the rear of my kitchen, which it afterward became necessary to occupy for a wood-house. Not liking to cut it away, I bent it down and laid the floor over it, so that it has been with the roots entirely under the building. Every year this vine produced as much fruit as it is capable of sustaining. It has a northerly exposure, and the grapes are usually the first ripe on the place. I do not think the berry quite as large as those that stand in a more open exposure; but the flavor is equally fine. I have one vine that has a westerly exposure, planted shallow, and the surface not covered; this dry weather the fruit has entirely perished. The next vine to it was planted in the same exposure, and same depth, but was afterwards filled in so as to bring the root about three feet under the surface, which was not covered with rubbish; the fruit has not wilted, but is not near the size of those vines which had a covered surface. I have one perpendicular arbor running north and south, and from the top of the arbor I have conducted several vines east and west. The fruit on the vines running west ripen ten days or a fortnight sooner than those running east. I have changed the vines, and the result was the same. I occupy no more ground with that arbor than the mere width of the post, which is about seven inches; and I cultivate on each side of it, close up to the post. I do not think it necessary, in order to cultivate grapes to any extent, to occupy any more space than the width of the post. I think the vine is all the better for having any sort of a green crop on the surface near it, so as to exclude the sun.

If I was going to set out a vineyard, I should set a row of posts six feet apart, then another row of posts parallel to them, thirty feet distant from the first row. I would then plant a vine at each post, conduct a number 12 wire from the top of one post to the other. I then could use the intermediate ground for any short crop of garden vegetables I wished. They would all do well; and by training a single vine up the post and across the wire, I would get full as many grapes, if not more, than when the whole arbor was occupied; and the wind has no effect upon it, the wire being so flexible that they do not suffer as much as those that are trained in an arbor. The posts ought to be high enough to drive under with a horse.

My time of trimming is late in the spring; at least I never commence trimming until the vine will bleed freely, which a great many people consider a great detriment; but when I cut out old wood, I always cut it three or four feet longer than I intend it shall be, so that when the first cut becomes gummed over, I cut away some more, to give the sap a free passage. I will venture to say my vines are the largest in the State of New York, for their age. The great difficulty with me is, that they are so loaded with fruit that I am obliged to pick off large quantities when green. In consequence of the superior flavor of my grapes, owing I think to the surface of the ground being covered and tilled, I have no trouble in selling them in advance, as I have now done, for the last two years—Messrs. Hope, corner of Chamber street and West Broadway, have engaged them.

In trimming, I suffer no old wood to remain that I can possibly remove, and trim the ones I wish for bearers, entirely smooth. I also make a second trimming in the course of the season, by removing all the middle growth. Yours, &c.

JAMES LOCKE, Florist.

From the Farmer and Mechanic.

Grapes.

Mr. Editor:

Dear Sir—I have just read in your valuable paper an article on the culture of the

grape, by James Locke, of Singsing. Mr. L. appears to attach much importance to deep planting, or compelling the roots of the vine two feet below the surface. Dr. Underhill, too, favors the same opinion. Is not this altogether at variance with agricultural chemistry!—such is my impression from reading Liebig, Johnstone, Dada, and others; but independent of these, I know from experience that it is altogether wrong. It is an old-fashioned practice in England to make vine borders of prepared compost, to the depth of six feet. I have had occasion to overhaul these several times, and invariably found the bottom of the border totally unfit for any plant to live in. Ten years past I had the first opportunity of seeing the grape vine in its natural state; and being passionately fond of growing the grape vine, I examined them closely, in the woods on the banks of the Hudson. I have dug up dozens of them, and invariably found their roots within six inches of the surface. From the past season's experience I am more than ever convinced that to plant the grape-vine deep, or which is the same thing, to fill up so as to bury the roots two feet below the surface, is detrimental. In the situation I now am, I have the charge of three vineyards; in the first of which the vines (six years ago) were planted too deep, consequently did not thrive well; to remedy this, fresh compost was added the next season, but without benefit; another gardener came—two or three, in fact—and ("a curse, by the way, to most vineyards, this repeated changing,) each of them took the same course; so that the roots (that is, the original roots) were buried all of three feet below the surface. When I came this past spring, I forded up part of the border very carefully, for fear of injuring the roots, but was surprised not to find any within reach. I then took a spade and dug down two feet, six feet from where the vines were planted, and there found some brown looking roots, which I traced to their extremities, and found that the whole of last season's formation had decayed. I then gave up all hope of perfecting a crop of grapes; but luckily there was a small space of about four feet in width from where the vines entered the house, to the flue, that had been filled up for sallad, &c., and into this border the vines had rooted from the stem. With these roots, well fed with guano, liquid manure, etc., and with the few roots made from the stems on the outside of the house, "near the surface," I have ripened a crop of grapes averaging twenty pounds to the rafter—being the first *crop* of grapes ever brought to maturity in the house, since the vines were planted; and some of the fruit judged of sufficient merit to take the second premium of the State Society.

I visited the vineyard of Dr. Underhill about four years since, in company with another gardener, and thorough grape-grower too; and it was the impression of both, that the grand secret of the Doctor ripening his grapes so uniformly, was a remarkably light sandy soil—the roots near the surface, and yet prevented from being scorched with the sun, by a liberal application of swamp muck as a top dressing, apparently not intended as a manure, but to preserve an uniform temperature in the soil.

Cutting off the roots of the vine does not prevent their finding their way to the surface; it may do so for a short distance, but it should be borne in mind that the vine is a great rambler, both top and bottom; and after cutting off all the roots two feet below the surface, it may still be a fact that the spongioles on which the vine depends for nourishment, are found close to the surface, though it may be at a distance of fifty feet from the vine.

Mr. L's plan of training and pruning the vine, I like very much; I believe it to be the only plan of growing the native grapes so as to obtain fair bunches of well flavored fruit, but thinks the less he crops the intermediate space, the better; for the first three years after planting. two or three rows of potatoes might be taken off; but after that, keep the surface covered with muck, and the cultivator freely at work.

Very respectfully, yours, G. K.

NEWARK, Sept. 20, 1845.

Keeping Potatos.

From an article in the Louisville Journal we extract the following interesting facts:

No potatoe should be housed in the fall, but those intended for immediate use—*all others should be pitted*. I will here describe the mode of pitting, as it appears to be the general impression in this country that the only safe way of keeping potatos is in a cellar. The idea is wrong, essentially wrong. As much of the crop as can, (conveniently at the time of digging,) should then be hauled as near to the barn and cattle sheds as practicable, and there pitted about two hundred bushels in a pit. The ground as high and dry as can be selected. The pit should be commenced *by simply levelling the surface of the ground*, about six feet wide and sixteen feet long. It may be longer if you please, but should not be wider. The potatos are then placed *upon* that levelled surface and heaped, slanting gradually inwards, until they reach one foot in width at the top. Then the whole should be well covered with *sound*

and *dry* straw; hay being so much more succulent, is very liable to rot, and consequently unfit for the purpose. This done, begin covering with the earth from around the pit, leaving a set-off at the bottom, of about eighteen inches, and *on that*, carry up the covering that thickness to the top, beating the earth occasionally *downward*, (not *in* against the potato heap,) so as to make it solid. About the centre of the top of the pit leave a small round hole, which fill tightly up with straw or hay, and if the heap begins to heat, this air-hole will permit the heat to escape sufficiently to prevent all danger of rotting. However such precaution *is rarely needed*, the thickness of earth being generally sufficient to keep the potato at its proper temperature. The top of the pit should be covered on the OUTSIDE with either a grass sod, or long drawn straw, covered with a spadeful of earth beaten over it to prevent it cracking from the weather, as either wet or wind getting to the potato will materially injure, if not destroy it. This covering will be quite sufficient until very hard freezing, and then, before the earth is frozen more than three inches deep, every pit should be well covered with half-rotted *stable* manure, sufficiently to prevent frost penetrating farther. When the frost is entirely over, then have the manure taken off of your pits. If you are feeding your potatoes to stock of any kind, you need never be afraid of opening a pit on the south side, (even during the hardest frost) and taking from it one or two days' provision at a time, and closing it up tight with straw and manure, again, you will find no more than a few of the outside potatoes, if any, even touched by the frost, which will never injure them when cooked the same day.

A cellar is not only *useless* but indeed *injurious* to the potatoes on a farm. For family use, potatoes should always be in the house at least a month before used, and in a situation where they would have the benefit of *much heat from the fire*. In Ireland, where, if they have nothing else good, all, EVEN THE NATIVES, allow they have the best potatoes there. Every one has his potatoe house, in which, if heat in no other way can be introduced, a fire is made two or three times a week, the door shut, and the potatoes allowed the full benefit of both the heat and the smoke.

In the poor man's cottage, the potatoes for family use are kept on a loft immediately over the fire place, constructed of hurdles laid on beams, where they have the full benefit of heat and smoke, and off that loft comes the best and sweetest potatoes I ever tasted in my life. *The potatoes intended for seed should never be taken out of the pit until they are going to be cut for seed*, unless they are found to be sprouting, in which case when discovered, if too soon for preparing the seed, they should be carefully turned and covered up again, which will be found sufficient to check the sprouting.

In the "Pen and Ink Sketches" written for the Boston Atlas, we find the following notice of Mrs. FRY the celebrated female visitor of prisons and insane asylums:

Her name is a familiar one, in every circle of humanity. She has long passed her grand climacteric—but years sit lightly on her calm, pleasant-looking face. As her bonnet is removed, we can see her features without any obstruction. Beneath the close plain Quaker cap is seen through the fine material her grey hair, which is simply parted in front, over her smooth, intelligent forehead. Her eyes are dark grey, and peculiarly sweet and mild in their expression.—There is quiet benevolence about the mouth, and old as she is, she might almost be called pretty. To her, society is deeply indebted for many of the prison reformations which have been of late years made—and owing to her humane labors, many a wanderer has been reclaimed from the paths of vice. It must have been a strange and striking sight to have witnessed a recent scene in Newgate. The King of Prussia, being on a visit to England, went to see the great metropolitan prison, and there met Mrs. Fry, who was engaged in imparting instruction to the female prisoners. At her invitation, the Monarch and his attendants knelt down in that assembly of felons, whilst Mrs. Fry offered up an extemporaneous prayer. It must have been a strange sight, alike for the Sovereign and the criminals, to witness each other, bowing before the Maker of them both, in so gloomy a sanctuary.

There is a beautiful anecdote, connected with Mrs. Fry, which I am tempted to relate here. It is the habit of that lady, when she visits a lunatic aylum, to sit down quietly and calmly amongst the poor people, however turbulent or noisy they may be, and commence, in her low, musical voice, reading the Bible. Her tones, generally, soon attract attention, and order is gradually produced.—On one of these occasions a young man was observed to listen very attentively—and though ordinarily one of the most violent of the patients, he became subdued, even to tears. When Mrs. Fry ceased reading, this poor maniac exclaimed to her. "*Hush! the angels have lent you their voices.*" Perhaps a more beautiful or more truly poetical compliment has never been paid to philanthropy.

Letter to the Horticultural Society.

Cincinnati, Sept. 26, 1845.

Mr. President:—Upon referring to some memorandums of my father, I find amongst others, the following account kept of the produce of his vineyard since 1837. As a number of our members are cultivating the vine, I thought it would be interesting, as it is difficult to obtain a statement of the kind kept minutely for a series of years.

It shows the actual produce, and the certainty of the crop before any other fruit in this latitude, and the difference between the Catawba and Isabella, as to the yield and certainty. The Isabella having borne a first rate crop for nine successive years, the Catawba failing occasionally, from rot and the effects of insects.

The vineyard has a southern exposure, fronting on the Ohio river, was planted with rooted plants in 1834, and contained at that time 1775 vines, placed in rows four feet apart, and three feet distance in the row—the ground being previously trenched, and the stones taken out to the depth of two feet.

In the fall of 1837, the first crop was picked as follows: 164 bushels grapes, from which was made 667 gallons of wine. At this time there was 1125 Isabella and Cape vines, yielding 113 bushels, making 469 gallons, and 650 Catawba, yielding 51 bushels, making 198 gallons.

1838,	vintage,	Sept. 10	produce	327	galls
1839,	"	Sept. 5	"	440	"
1840,	"	Sept. 20	Isabella	240	"
"	"	"	" Catawba	45	"

This year (1840) most of the Catawba rotted on the vines. From this time there were 2300 vines, about one half of each kind.

1841,	vint.	Sept. 15,	produce	237 g. Catawba
"	"	"	"	275 " Isabella,
				512 gallons.
1842,	vint.	Sept. 12,	"	166 " Catawba
"	"	"	"	319 " Isabella
				485 gallons.
1843,	vint.	Sept. 15	"	250 g. Cataw.
"	"	"	"	288 " Isabella,
				538 gallons.
1844,	vint.	Sept. 12	"	108 g. Cataw.
"	"	"	"	306 " Isabella,
				414 gallons.
1845,	vint.	Lept. 9	"	283 g. Isabel.
"	"	"	"	349 " Cataw.
				632 gallons.

About one-eighth of the Catawba grapes were destroyed by bees and other insects, after ripening.

The quantity eaten by three families is not taken into this account.

The ground has always been thoroughly hoed in the spring and kept free from weeds, never manured, until last winter, when the ground was covered and dug in, in the spring, and from the result this season it would pay well, as the vines are in better condition than they ever were, after yielding a heavy crop.

The vines have been trained to stakes, and the bearing wood cut out, after having borne one season, leaving two shoots, trained the same season, one to form the bearing hoop or bow, and the other cut to two eyes, to propagate wood for the next year, the vine never having but the hoop and the two eyes left for fruit each year growing at the same time.

This year the ends of the vines have been nipped and the suckers taken out four different times.

The following estimate I have made from what it has cost this year, and is not far from the actual expense, although the labor has been done by the hands doing the other work on the farm; and in making wine, extra hands were always employed. By planting cuttings, and preparing the ground by subsoil plowing, when it can be done, would lessen the expense. The price is what the wine was sold at from the press the season, and is a low estimate.

ESTIMATE.

2,300 vines, at 6 cts.	$138 00
2,300 poles, at 3 cts.	46 00
1,000 do replaced,	20 00
Trenching ground and planting,	80 00
Manuring last fall,	30 00
Two months work each year, 9 years,	225 00
Extra work in making wine,	150 00
Interest on investment before crop,	15 00
	704 00
Cr. by 4,306 gallons wine, at 75 cts.	3,229 50
	$2,525 50

The expense of cultivation previous to the first crop is not accounted for, nor is the press, casks, &c.; but the actual expense of cultivating an acre of grapes, where persons are hired to attend to other work, would amount to but very little, as but a short time is required to attend to cleaning the vines during the season.

Yours, respectfully,

Wm. Resor.

He who peeps through a whole may see what will vex him.

'Tis the most dangerous vice which looks like virtue.

'Tis much more painful to live ill than to live well.

The less a man sleeps the more he lives.

Mildew.

Very few seem to be aware of the nature of that substance called mildew. We copy an abstract of a lecture by Professor Lindley, of England, on the subject:

Mildew is often confounded with blight, honey dew, &c. but is a distinct substance, and peculiar to peculiar tribes of plants. It generally appears on the leaves or stems, in the form of *red, white, and black spots*, as a number of minute projections, or frosty incrustations, or a brownish powder, spreading more or less rapidly, till the plant is destroyed. Mildew is fungi of different kinds, and these are divided into three classes: 1st, those which grow or lie on the surface of leaves; 2d, those which are formed in the interior of the stem or leaf, and produce when ripe; and 3d, those which only attack the roots. All these seldom appear but in Autumn.

The first of these fungi injure the plant by preventing its respiration. One of the most common of the fungi, which attack the common cabbage, is the *Cylindrosporium concentricum*, and they have the appearance of small white patches or specks of frosty incrustation. The mildew which attacks rose bushes, and many other flowering shrubs, is a kind of Uredo, so called, from *Ura*, to burn or scorch; for it gives to the plant attacked the appearance of being scorched. The fungus called *Acrosporium, Monilioides*, resembles, when magnified, a string of beads, and consists of a number of globules which, when ripe, fall, take root, and form fresh strings, or neck-laces. Sometimes tufts of these appear, fixed to stalks, and are then called *Aspergillus*, from their fancied resemblance to the brushes used for sprinkling holy water. The superficial mildew which infects the onion, and is fatal to that plant, is called *Botrytis*, or bunch of grapes. The bean and pea have a superficial mildew (*Uredo Fabæ*) which spreads along their leaves like white roots curiously interlaced.

The second class of fungi which spring from the interior of the leaves and stems, are the most fatal. They appear in a sort of bag or case, supposed to be formed of the cuticle of the affected leaf. These attack the oak, pine, and other forest trees; the genus is the *æcidium*. The *æcidium pine*, found on pine trees has, when magnified, the appearance of a number of nine-pins. When ripe it emits a bright orange colored powder. A mildew of this kind attacks barley, and is very injurious. It is vulgarly called pepper brand. The *Uredo Segetum* or smut is destructive not only to barley, but to wheat and oats. It destroys the grain, which is converted into a kind of jelly, and attacks the leaves and stems. The *puccinia graminis* which attacks corn, is formed in the interior of the stock, and, when ripe, burst forth into clusters, like bunches of grapes, of a dark brown color. The *ergot* on rye is a well known and destructive species of mildew. It grows out of a spike of grain, like a prolonged kernel; is long, horney, and cartilaginous. It originates in the centre of the stem. It affects maize, and various species of grass.

The principal fungi of the third class are two, which attack the roots of plants, and both resemble truffles. One of these (*Rhizoctonia Crocorum*) attacks crocuses. It is called by the French *Lamort du safran*, and soon destroys the whole crop. The other fungus (*Periola tomentosa*) is found on the potato, lucerne, &c. It turns the roots to a purplish hue. They are both propagated by spawn or fibres, which cling round the roots. All these fungi propagate rapidly, requiring only twenty-four hours to come to maturity. One mushroom will propagate 250,000,000. Plants, Dr. L. says, are generally most affected by superficial fungi after a long drought. *Red plants* are said to be more liable to mildew than any other. Mr. Bauer has found that steeping grains of corn in lime-water, will cure, or at least, prevent the spread of the internal mildew. There appears, however, as yet, to be no cure for mildew in the roots, but by forming a deep trench round the infected plants, and cutting off all communication between them and the rest of the field. W.

Charcoal in Wheat.

By all means remember that it is far better to sow but five acres, and so feed the plants that they will give you forty bushels per acre, than to sow fifteen acres, and starve the young wheat plants down to twelve bushels per acre, and have even that badly shrunken with rust. Don't forget that it takes less seed, and fewer hard days' work to raise 200 bushels on *six*, than on *fifteen* acres of land.

Nothing is more common in Western New York, Pennsylvania and Ohio, than for land to be too rich in vegetable mould, to bring good wheat. The straw grows too rank, and thick, and is very liable to be affected by rust. To prevent this latter malady, Mr. Haywood of Buffalo, has used charcoal with signal success. Mr. H. is the owner of a tract of splendid wheat land near Sandusky, Ohio, where he has two flouring Mills. He has kindly furnished us with a plot of seven wheat fields, taken for experiments this season, with the results, which follow:

No. 1—20 acres—applied fifty bushels of

coal, ground fine, per acre. Yield 25 bushels per acre.

No. 2—4 acres—no coal applied; wheat badly rusted; yield 5 bushels per acre.

No 3.—15 acres—coal as in No. 1; yield 25 bushels per acre.

No. 4—25 acres—coal as in No. 1; yield 35 bushels per acre.

No. 15—5 acres—coal; yield 25 bushels per acre.

No. 6—8 acres—no coal; yield 5 bushels per acre.

No. 7—6 acres—no coal; yield 3 bushels per acre.

Note.—No. 4 was seeded with *old* wheat.

The soil, culture, &c., were precisely alike, except the use of fifty bushels of coal per acre, as designated—sown in April and May. The soil abounds in lime and organic matter.

Mr. Haywood will apply 10,000 bushels of coal to the fields to be sown in wheat this autumn. It costs him $30 per 1000 bushels. He grinds it in a common bark mill used by tanners.—*Gen. Farmer.*

Manufacture of Clocks in Connecticut.

The New Haven Courier contains an account of the clock factory of Mr. Jerome, in that city. This establishment is one of the most extensive of the kind in the United States. The amount of business done and the quantity of materials used in this kind of business at one manufactory are truly surprising, as will be seen by the following extract:

On entering, our ears were greeted with the mingled hum of buzz saws, the thunder of two powerful steam engines, and the clatter of machinery. Our attention was first drawn to the sawing works, by which the cases are cut out and fitted as if by magic. Boards in the rough state are cut into proper lengths for the front, sides, top, and bottom of cases. These are again subjected to the action of finer saws, and cut in perfect order for being matched and put together; no other smoothing or levelling process is used except what these saws accomplish. Mahogany logs and billets are reduced to veneering with the quickness of thought; and this alone, of all the wood-work about a clock, is smoothed, or in any way remoddled, after being cut from the unplained timber. The veneering, which is principally of mahogany, rose-wood, and black walnut, is taken, after being glued to the different parts composing the case, to a room set apart for the purpose, in which there are employed at this branch, some eight or ten hands, and there receives an even surface and six coats of varnish, which, when finished, will compare in elegance with the finest articles of furniture in the cabinet ware rooms of our city.

The movements are all cut in proper forms and sizes by dies, with great precision and rapidity, even to the pivot holes in the plates, which have before been drilled. The cogs in the wheels, second, minute, and hour stops, are grooved out by the same rapid and skillful process. The posts, pins, and smaller pieces of the inside work are turned from the more rough materials, polished and finished at the same time, while the plates and wheels are cleansed and polished by rinsing first in a strong solution of aquafortis, and then in pure water.

We cannot describe minutely the whole process of making a clock, or the life-like movements of the machinery; it would take more time and space than we can at present devote to this purpose. In short, the case, movements, plates, face, &c., which, when put together, forms one of Jerome's celebrated "*eight-day clocks*," go through some fifty different hands before completed. One man can put together about seventy-five movements per day, while every part, from the first process to the finishing, goes on with equal rapidity.

We learn from him, that the greatest bulk of clocks which he anticipates making this year, are designed for European markets, and that he has already received orders from houses in London and Birmingham, England, a large house in Scotland, and also from some quite extensive dealers in Canada. In fact, the Yankee clock is becoming a general favorite in England, almost entirely superceding the old Dutch clock, which has long been used there as a time-piece.

He yearly consumes of the various articles used in the manufacture of clocks, the following enormous quantities:

500,000 feet pine lumber; 200,000 feet mahogany and rose-wood veneers; 200 tons of iron for weights; 100,000 pounds of brass; 300 casks of nails; 1,500 boxes of glass, fifty feet per box; 1,500 gallons varnish; 15,000 pounds wire; 10,000 pounds glue; 30,000 looking-glass plates.

2,400 dollars are paid yearly for printing labels, and for screws, saws, coal, and oil.

Workingmen employed, 75; paid wages yearly, 30,000 dollars; clocks made per day, 200; year, 50,000.

A Substitute for Coffee.—A letter from a gentleman to Hon. H. L. Ellsworth, Washington, says the ripe seeds of the plant *okra*, much used in soup, &c., burned and used as a coffee, cannot be distinguished from it, even the best Java. The seeds are sown an inch deep in drills, four feet apart in May, and cultivated like corn or peas. It yields abundantly, and is very healthy. Mr. E. has the seeds.

"Ribbing" in Wheat.

Mr. Thos. Noble, of Stark county, near Massilon, whom we visited a few days since, practices a mode of putting in wheat that is called in his native country (England) "ribbing," and from his experience in this country, he is convinced that it is superior to the common mode of sowing, at least for his kind of soil, which is a fine hazel loam, or what was called "oak plains" in that region, and is well adapted to this crop. After the land has been thoroughly plowed and harrowed, till it is in what would commonly be called good order for sowing, Mr. Noble goes over it with small narrow one horse plows, made for the purpose, and which leaves the land in open furrows, four or five inches deep and ten or eleven inches apart; the seed is then sown; one bushel to the acre, and the ground harrowed once over lengthwise of the furrows. This harrowing brings the seed into the furrows and covers it there, and leaves slight ridges between, so that the plants appear as if drilled in rows and the ridges afford them protection in winter, and keep the ground in a mellower state in summer, besides affording a freer circulation of air, &c. We think the plan eminently worthy of trial, especially on such lands as are subject to "winter killing." It is an improvement on the plan of plowing in wheat practised by many. With a gang of plows, or machine for making three or four furrows at once, which Mr. Noble intends to construct for this purpose, the amount of labor will be very much reduced.—*Ohio Cul.*

Perseverance.—Mechanic Magistrate.—"I recollect," says Sir Jonah Barrington, "in Queen's county, to have seen a Mr. Clarke, who had been a working carpenter; and when making a bench for the sessions justices at the court house, was laughed at for taking peculiar pains in planing and smoothing the seat of it. He smilingly observed, that he did it to make it easy for himself, as he was resolved that he would never die till he had a right to sit thereupon; and he kept his word. He was an industrious man, honest, respectable and kind-hearted. He succeeded in all his efforts to accumulate an independence; he did accumulate it, and uprightly. His character kept pace with the average of his property, and he lived to sit as a magistrate on that very bench that he shaved and planed.

He who abandons his poor kindred, God forsake him.

He who is not handsome at twenty, nor strong at thirty, nor rich at forty, nor wise at fifty, will never be handsome, strong, rich, or wise.

Kentucky versus Race Horses.

Mr. Weissinger, of the Louisville Journal, thus speaks in one of his letters from the East, of Horses:

Racing improves the breed of horses, but the less racing blood the better for everything but the turf. No two animals of the same species could well be more unlike in form than the Morgan or Canada horse and the racer, and nothing could be more manifest than the superiority of the former over the latter as fast-moving roadsters, with or without heavy weights. We have the racer, (enough for sport, and they are fit for nothing else unless it be for an express mail;) let us breed off from the racer with the Morgan and Canadian and the Conestoga. Some people have an idea that the more race blood the better for all purposes. The idea is refuted by experience in all countries. No racer is equal to the London cart-horse or the Conestoga for the dray or wagon. None are equal to the Canada pacer for pacing.—None equal to the Canada, Vermont, or New York trotter for trotting. None equal to the English hunter for hunting. None equal to the English Cleveland bay for coaches.—In England they have distinct breeds for every use—amblers for ladies' riding horses, hunters for fox hunting, cart-horses for carting, Cleveland bays for carriages, and race horses for the turf. It should be ordered in the same way here.

The Potatoe Rot, of which complaints are made in this country has appeared in France. A Professor of Agriculture and Rural Economy in the University of Liege, Charles Morren, ascribes the disease to a fungus extremely thin and prolific. He particularly describes it, after having closely studied the whole action of this *botrydis*. This fungus is of an extreme tenuity, but pullulates or reproduces, in an incredible measure. Its trunk is composed of several erect, jointed fibres, bearing at their summits one or more branches, always double, and at the ends of which appear the reproductive bodies, in the form of an egg, but which do not really exceed in diameter the one hundredth part of a millimetre, or the 392,700th part of an inch.

The French government has taken measures for a proper investigation of the evil.

He who pretends to be every body's particular friend is nobody's.

Let him speak who received, let the giver hold his peace.

A house built by a man's father, and a vineyard planted by his grandfather.

He who plows his land, and breeds cattle, spins gold.

A Ship Sailing 18,000 Feet above the Sea.—Some very remarkable particulars are given in a Montevideo journal of British enterprise, one of whose most remarkable features is a "ship sailing 18,000 feet above the sea." The gold mines of Tapuana, and the emerald mines of Illimani, are situated on the banks of the Lake Chiquito. The only vegetable produce of the district is a species of red potato, called the *chusma*, and a few nutritious plants; but to the east of the Lake, at Copacasana and in the valleys of the Bolivia, are cultivated maize, barley, and fruit-bearing trees. The difficulty of feeding from their own scanty region, the large body of Indians working in the mines, suggested the idea of building a vessel for the navigation of the lake. An old brig was accordingly purchased and stripped of her anchors, sails, and rigging; and stocks being built, after two years of painful and unceasing labor, the vessel was launched on the lake, and a regular communication opened with the produce of the valleys of the Bolivia. The brig is well furnished with all the necessaries, except anchors, which even the perseverance of these English speculators could not raise to so great a height. The same enterprizing parties have transported a steam engine across the Cordilleras, dug through the metalliferous hills of Lacaycota, a canal 2000 feet in length, traversed by nine locks, and laid down a railway at its extremity, for the conveyance of their ore. The island of Titicaca in this lake, is assigned by tradition as the cradle of the earliest Peruvian civilization, and the sacred burial place of the ancient kings of the country.

A Prairie Railroad.—We learn from a person late from Springfield, Illinois, that Judge Semple, of Alton, has had a Locomotive and cars constructed to run over prairies by steam power without railways. The wheels are four feet broad, and six feet diameter; the size of the cars is 29 by 15 feet.

It is expected by the proprietor that he will be able to carry in each car from 40 to 50 tons. It is intended to run between Springfield and Alton; a distance of 70 miles, winding round the hills and eminences, to procure a level track.

He had every thing ready and was about to make his first experiment, when our informant left.

The best cure for hard times is to cheat the doctor by being temperate, the lawyer by keeping out of debt, the demagogue by voting for honest men, and poverty by being industrious: but pay the PRINTER, if you wish to be happy.

Wonders of the Iron Manufacture.—The total amount of iron annually produced in the United States is 300,000, tons, all of which and much more is consumed in this country. The amount of nails alone is supposed to be fifty thousand tons. Forty thousand casks (or four million pounds) are annually made by the Boston company on the mill dam. If we suppose that the nails will average one hundred and sixty to a pound, the number here produced each working day would be nearly two millions. This is supposed to be but the twenty-fifth part of the nail manufacture of the United States. It seems incredible that about fifty millions of nails are made, bought, sold, and used every day in the United States, yet such seems to be the fact.—*Balt. Sun.*

YANKEE ENTERPRISE.—The town of Rome, in western New York, containing a population of over five thousand, has been built up by factories for making paddles and oars from the ash, thousands of which are shipped by almost every vessel for England, France, Germany, Prussia, Sweden, Russia, and throughout the east. The Junks of the Chinese are now all managed by American oars, and the small boats of all Europe and Asia are now propelled by the enterprise of the people of that village.

The large carpet lately finished at the royal manufactory of the Gobelins, has been put down on the floor of the ambassador's hall at the Palace of Versailles. It is the most splendid carpet in the world, it was commenced sixty-two years ago, or in 1783, and has but just been completed. The whole border is worked with rich borders of flowers, and the four corners each with a large bunch of roses, copied from celebrated paintings, and embracing all the roses known in France.—*Cin. Atlas.*

Salting Meat in a few Minutes.—A patent has been secured for salting meat in a few minutes. The meat is placed in an iron vessel and the air is then exhausted from the vessel by an air pump, and the brine let in from another vessel. This again is drawn off by the air pump, and new brine injected by a forcing pump, so that the meat is cured in fifteen minutes.

Mammoth Grapes.—A correspondent of the Philadelphia North American says there is in the vinery of Dr. A. Mitchell, near the city, a bunch of grapes three feet wide across the shoulders and twenty-eight inches long, (perpendicular)—no mistake in figures. It is the genuine grape of Palestine, and called La Palestine.

A thousand things are well forgot for peace and quietness' sake.